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DY.

Ionescu, D. V. Généralisation d'une propriété qui intervient dans la méthode de Runge et Kutta d'intégration numérique des Equations différentielles. Acad. R. P. Roum. Bul. Sti. Sect. Sti. Mat. Fiz. 8 (1956), 67-100. (Romanian Russian and French summaries)

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Vol. Ser. A-8 (1956), 407-411. (Romanian)

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ACT

IONESCU, D.V.

Quadratic forms with external knots. Studii cerc mat Cluj 9 no.1/4:  
45-134 '58. (EEAI 10:5)

1. Institutul de calcul al Academiei R.P.R., Filiala Cluj; Comitetul  
de redactie, Studii si cercetari de matematica (Academia R.P.R.,  
Filiala Cluj, Institutul de calcul).  
(Forms, Quadratic) (Differential equations)  
(Topology)

IONESCU, D.V., prof.

Canonical form of a determinant and its application. Studii cerc mat  
Cluj 10 no.1:33-44 '59. (EEAI 10:6)

1. Comitetul de redactie, Studii si cercetari de matematica  
(Filiala Cluj, Institutul de calcul).  
(Forms (Mathematics)) (Determinants)  
(Transformations (Mathematics))

IONESCU, D.V., prof.

Reduction of a bilinear form to a canonical form. Studii cerc mat  
Cluj 10 no.1:45-49 '59. (EEAI 10:6)

1. Comitetul de redactie, Studii si cercetari de matematica  
(Filiala Cluj, Institutul de calcul).  
(Forms (Mathematics)) (Matrices)

IONESCU, D. V., prof.

Application of formulas of numerical derivation to the numerical  
integration of differential equations. Studii cer mat 10 no.2:  
259-315 '59. (EEAI 10:9/10)

1. Universitatea Babes-Bolyai, Cluj, Catedra de ecuatii diferentiale,  
membru al Comitetului de redactie, "Studii si cercetari de matematica"  
(Filiala Cluj).

(Differential equations) (Integrals)  
(Numerical functions)

16.6500

S/044/62/000/007/052/100  
C111/C333

AUTHOR: Ionescu, D. V.

TITLE: ~~The application of successive approximations to the numerical integration of differential equations~~

PERIODICAL: Referativnyy zhurnal, Matematika, no. 7, 1962, 26, abstract 7V129. ("Bull. math. Soc. sci. math. et phys. RPR", 1959, 3, no. 4, 423-431)

TEXT: The approximate solution of the equation  $y' = f(x, y)$  with the initial condition  $y(x_0) = 0$  is determined by the successive approximations

$$y^{(0)}(x) = \int_{x_0}^x f[\xi, 0] d\xi, \quad y^{(s)}(x) = \int_{x_0}^x f[\xi, y^{(s-1)}(\xi)] d\xi \quad (s=1, 2, 3, \dots).$$

It is suggested that the values of  $y^{(s)}(x)$  in the points  $x_1, \dots, x_n$  be calculated using an improved trapezoid formula, thereby using the obtained values

$y^{(s-1)}(x_i)$ . The necessary exactness of the approximate solution in the Card  $1/2^i$

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C111/C333

The application of successive . . .

points  $x_1, \dots, x_n$  with corresponding  $s$  is guaranteed by some natural assumptions concerning the function  $f(x,y)$ . An analogous method for the solution of the hyperbolic equation

$$\frac{\partial^2 z}{\partial x \partial y} = f(x,y,z,p,q) \quad (z(x,0) = z(0,y) = 0)$$

where  $p = \frac{\partial z}{\partial x}$ ,  $q = \frac{\partial z}{\partial y}$ , is given.

[Abstracter's note: Complete translation.]

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IONESCU, D. V., prof. (Cluj)

The cubature formulas; application in the numerical integration of the equations with partial derivatives of the second order of a hyperbolic type. Studii cerc mat Cluj 11 no.1:35-78 '60.  
(KEAI 10:9)

1. Comitetul de redactie "Studii si cercetari de matematica".

(Equations) (Integrals) (Hyperbola)

8/044/63/000/002/031/050  
A060/A126

AUTHOR: Ionescu, D.V.

TITLE: New Adams type formulae for the numerical integration of first order differential equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 2, 1963, 4, abstract 2V8  
(Studii și cercetări mat. Acad. RPR Fil. Cluj, 1960, v. 11, no. 1, fasc. anșă, 101 - 116; Rumanian; summaries in Russian, French)

TEXT: Let  $f(x, y)$  have partial derivatives with respect to  $x$  and  $y$  up to  $n$ -th order inclusive, continuous in the rectangle

$$|x - x_0| < \alpha, \quad |y - y_0| < \beta.$$

Then for a differential equation of the form  $y' = f(x, y)$  there holds the numerical integration formula

$$y = L[x_0, x_1, \dots, x_n; y(x)] + R(x), \quad (1)$$

where  $L[x_0, x_1, \dots, x_n; y(x)]$  is a Lagrange interpolation polynomial. Assuming that the points  $x_0, x_1, \dots, x_{n+1}$  are arbitrary and that  $f(x, y)$  pos-

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A060/A126

New Adams type formulae for the numerical...

sesses partial derivatives with respect to  $x$  and  $y$  up to the order  $n + k$  inclusive, the author derives from formula (1) and equation

$$y^{(k)}(x) = f_{k-1}(x, y)$$

the Adams type formula

$$\begin{aligned} y(x_{n+1}) = & y(x_n) + \frac{x_{n+1} - x_n}{1!} F(x_n) + \frac{(x_{n+1} - x_n)^2}{2!} F_1(x_n) + \\ & + \dots + \frac{(x_{n+1} - x_n)^{k-1}}{(k-1)!} F_{k-1}(x_n) + B_k F_{k-1}(x_n) + \\ & + B_1[x_0, x_1; F_{k-1}(x)] + B_2[x_0, x_1, x_2; F_{k-1}(x)] + \\ & + \dots + B_n[x_0, x_1, \dots, x_n; F_{k-1}(x)] + R, \end{aligned} \quad (2)$$

where

$$\begin{aligned} |R| & < \frac{H_{k-1}}{(n+1)!}, \quad H_{k-1} = B_{n+1} \bar{F}_{k-1} + \\ & + K F_n \int_{x_n}^{x_{n+1}} \frac{(x_{n+1} - s)^{k-1}}{(k-1)!} (s - x_0) [(s - x_0) + (x_1 - x_0)] \dots \\ & \dots [(s - x_0) + (x_n - x_0)] ds. \end{aligned}$$

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New Adams formulae for the numerical ....

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If the points form an arithmetic progression with increment  $h$ , then the formula becomes a formula whose remainder term is of the order  $h^{n+k+1}$ , which proves the advantage of these formulae over Adams's formulae. There are 4 references.

I.F. Shelikhova

[Abstracter's note: Complete translation]

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S/044/62/000/012/031/049  
A060/A000

16.6500

AUTHOR: Ionescu, D.V.

TITLE: Application of the method of successive approximations to the numerical integration of differential equations

PERIODICAL: Referativnyy zhurnal, Matematika, no. 12, 1962, 29 - 30, abstract 12V156 (Studii si cercetari mat. Acad. RPR Fil. Cluj, 1960, v. 11, no. 2, 273 - 286; Rumanian; summaries in Russian, French)

TEXT: A numerical realization is constructed for the known method of Picard's successive approximations for the solution of the Cauchy problem

$$y' = f(x, y), \quad y(x_0) = y_0, \quad (1)$$

consisting in that the segment  $x_0 \leq x \leq x_0 + \gamma$  of the  $x$  line is covered by a grid  $\Gamma$  with points  $x_0, x_1, \dots, x_n = x_0 + \gamma$  and at the  $v$ -th step of the process

$$y^{(v)}(x) = \int_{x_0}^x f(\xi, y^{(v-1)}(\xi)) d\xi, \quad v = 1, 2, \dots \quad (2)$$

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one defines the quantities  $y^{(v)}(x_1)$ ,  $i = 1, \dots, n$ , and the integrals

$$\int_{x_0}^{x_1} f(\xi, y^{(v-1)}(\xi)) d\xi$$

are calculated by the quadrature formula

$$\int_{\alpha}^{\beta} \Phi(x) dx = \frac{\beta - \alpha}{2} [\Phi(\beta) + \Phi(\alpha)] - \frac{(\beta - \alpha)^2}{12} [\Phi'(\beta) - \Phi'(\alpha)] + R, \quad (3)$$

$$R = \frac{1}{24} \int_{\alpha}^{\beta} (x - \alpha)^2 (\beta - x)^2 \Phi^{IV}(x) dx.$$

The following theorem is proven: Let: 1) the function  $f(x, y)$  be defined on the rectangle  $D(x_0 \leq x \leq x_0 + a, |y| \leq b)$  and let it have partial derivatives of the first four orders with respect to  $x$  and  $y$  continuous in that rectangle; 2)  $y(x_1)$  be the exact solution of the problem (1) determined at the  $i$ -th point

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Application of the method of successive ....

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of the grid  $\Gamma$ , and  $y_1^{(\nu)}$  be the approximate solution of that problem calculated at the  $\nu$ -th step of the Picard process (2) according to the quadrature formula (3), neglecting the remainder term  $R$  at that grid point; 3)  $\delta$  be a specified number from the segment  $0 < \delta < b$ ,  $M = \sup_D |f(x, y)|$ ,  $\gamma = \min(a, \frac{b - \delta}{M})$ ,  $\varepsilon$  is any prespecified positive number. Then there exists an approximation number  $\nu$  and a grid  $\Gamma$  of grid points  $x_0, x_1, \dots, x_n$  such that the inequality

$$|y(x_1) - y_1^{(\nu)}| \leq 2\varepsilon$$

is satisfied for all the grid points of the grid  $\Gamma$ . In the case of a uniform grid  $\Gamma$ , i.e.,  $x_1 = x_0 + 1h$ ,  $h = \frac{\gamma}{n}$ ,  $i = 0, 1, \dots, n$ , inequalities are established from which on the basis of the specified  $\varepsilon$  one also finds the number  $n$  of its grid points and the number  $\nu$  of its approximation. Here it is assumed that no errors of computation are admitted in the process of realizing the constructed computational algorithm.

P.S. Bondarenko

[Abstracter's note: Complete translation]

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D237/D301

16.4500

AUTHOR: Ionescu, D.V.

TITLE: Numerical integration of a Volterra-type integral equation

PERIODICAL: Studii si cercetări de mecanică aplicată,  
no. 1, 1961, 175 - 183

TEXT: Considering a non-homogeneous Volterra-type integral equation

$$\varphi(x) + \int_a^x K(x, t) \varphi(t) dt = f(x) \quad (1) \quad (1)$$

the author attempts to determine in this article a network of knots in arithmetic progression  $\Gamma$ , on the  $[a, b]$  interval, corresponding to a given, positive number  $\varepsilon$ , as well as an algorithm for calculating some  $\varphi_1(p)$  numbers, where  $p = 0, 1, \dots, U$ , in order to

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obtain  $|\varphi(x_1) - \varphi_1^{(v)}| < 2\varepsilon$ , on all  $x_1$  knots of the  $\Gamma$  network. The operation method is similar to the one regarding the numerical integration of differential equations and of equations with hyperbolic-type partial derivatives, presented at the Colocviul de Mecanică (Mechanical Colloquium) in Bucharest on October 25 - 29, 1959, and at the Colocviul de teoria ecuațiilor cu derivate parțiale (Colloquium of the Theory of Equations with Partial Derivatives) in Bucharest on September 21 - 26, 1959. In the integral equation (1) it is assumed that the function  $f(x)$  is continuous in the  $[a, b]$  interval and that the nucleus  $K(x, t)$  is a continuous function of  $x$  and  $t$  in the triangle  $T$  defined by

$$a \leq x \leq b, \quad a \leq t \leq x. \quad (2) \quad (2)$$

The integral  $\varphi(x)$  is the sum of the series

$$\varphi^{(0)}(x) + [\varphi^{(1)}(x) - \varphi^{(0)}(x)] + \dots + [\varphi^{(n)}(x) - \varphi^{(n-1)}(x)] + \dots \quad (4) \quad (4)$$

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which is absolutely and uniformly convergent in the  $[a, b]$  interval. The author then deduces

$$|\varphi(x) - \varphi^{(p)}(x)| \leq F_0 e^{K_0(b-a)} \frac{K_0^{p+1}(b-a)^{p+1}}{(p+1)!},$$

in which  $F_0$  and  $K_0$  are the upper limits of  $|f(x)|$  and  $|K(x, t)|$  in the  $[a, b]$  interval and the triangle  $T$ . Since  $\varepsilon$  is a given positive number, the natural number  $p$  can be selected so that

$$|\varphi(x) - \varphi^{(p)}(x)| < \varepsilon, \quad (6)$$

for every  $x$  in the  $[a, b]$  interval. The number  $p$  remains fixed in the whole work. For the numerical integration of Eq. (1), the following supplementary hypotheses are established for the function  $f(x)$  and for the nucleus  $K(x, t)$ : 1) The function  $f(x)$  has the continuous derivatives  $f'(x)$ ,  $f''(x)$  in the  $[a, b]$  interval; and 2) The nucleus  $K(x, t)$  has the continuous partial derivatives

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$\frac{\partial K}{\partial x}, \frac{\partial K}{\partial t}, \frac{\partial^2 K}{\partial x^2}, \frac{\partial^2 K}{\partial t^2}$  in the T triangle. From here, it can be deduced that the functions  $\varphi^{(p)}(x)$ , in which  $p = 0, 1, \dots, v$  have continuous derivatives of the first and second order in the  $[a, b]$  interval. Denoting by  $F_0, F_1, F_2$  the upper limits of  $|f(x)|, |f'(x)|, |f''(x)|$  on the  $[a, b]$  interval, the author obtains

$$|\varphi^{(0)}(x)| \leq F_0, |\varphi^{(1)}(x)| \leq F_1, |\varphi^{(2)}(x)| \leq F_2 \quad (8)$$

Denoting by  $K_0, K_{10}, K_{01}, K_{20}$  and  $K_{02}$  the upper limits of

$$|K(x, t)|, \left| \frac{\partial K}{\partial x}(x, t) \right|, \left| \frac{\partial K}{\partial t}(x, t) \right|, \left| \frac{\partial^2 K}{\partial x^2}(x, t) \right|, \left| \frac{\partial^2 K}{\partial t^2}(x, t) \right|,$$

in the T triangle, the author deduces that

$$|\varphi^{(v)}(x)| \leq F_0 + K_0 \int_a^b |\varphi^{(v-1)}(t)| dt, \quad (9)$$

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$$\begin{aligned} |\varphi^{(p)}(x)| &\leq F_1 + K_0 |\varphi^{(p-1)}(x)| + K_1 \int_a^x |\varphi^{(p-1)}(t)| dt, \\ |\varphi^{(p)}(x)| &\leq F_2 + (2K_{10} + K_{01}) |\varphi^{(p-1)}(x)| + K_0 |\varphi^{(p-1)}(x)| + \\ &\quad + K_{20} \int_a^x |\varphi^{(p-1)}(t)| dt. \end{aligned} \quad (9)$$

Eqs. (8) and (9) supply the upper limits of the functions  $\varphi^{(p)}(x)/\varphi^{(p)}(x)$ ,  $\varphi^{(p)}(x)/\varphi^{(p)}(x)$  in the  $[a, b]$  interval. The upper limits of the latter functions are denoted by  $\phi_0, \phi_1, \phi_2$  in the  $[a, b]$  interval for all values of the index  $p, p = 0, 1, \dots, \nu$ . On the basis of these considerations, the functions  $\psi^{(p)}(t)$  are expressed by

$$\psi^{(p)}(t) = K(x, t) \varphi^{(p)}(t) \quad (10)$$

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in which  $x$  is a number from the interval  $[a, b]$ . The upper limit of  $|\psi^{(p)}(t)|$  in the  $[a, b] \subset [a, b]$  interval is finally given by

$$|\psi^{(p)}(t)| \leq N, \quad (11)$$

for all values of the index  $p$ , i.e.  $p = 0, 1, \dots, \nu$ , in which  $N$  is:  $N = K_{02} \phi_0 + 2K_{01} \phi_1 + K_0 \phi_2$ . The author determines a network  $\Gamma$  on the  $[a, b]$  interval, consisting of the knots  $a, x_1, \dots, x_{n-1}, b$  and an algorithm for calculating the  $\varphi_1^{(p)}$  numbers for  $p = 0, 1, \dots, \nu$ , in order to have for the knots of the  $\Gamma$  network  $|\varphi_1^{(\nu)}(x_1) - \varphi_1^{(\nu)}(x_n)| < \varepsilon$ , ( $x_0 = a, x_n = b$ ). Since  $\varphi^{(0)}(x) = f(x)$ , one may take

$$\varphi_1^{(0)} = f(x_1). \quad (12)$$

(12)

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Numerical integration of ...

The interval  $[a, b]$  is divided into  $n$  equal parts in the points  $x_1, x_2, \dots, x_{n-1}$ , thus forming the  $\Gamma$  network from the knots  $x_0, x_1, \dots, x_{n-1}, x_n$ . Selecting the number  $n$  to be equal with the smallest natural number which fulfills the condition

$$N \frac{(b-a)^3}{12n^3} < \varepsilon_1. \quad (15)$$

the author deduces

$$\varphi^{(1)}(x_1) = \varphi_1^{(1)} - R_1^{(1)}, \quad (17)$$

in which  $|R_1^{(1)}| < \varepsilon_1$ . The author then deduces  $\varphi^{(2)}(x_1)$ , given by

$$\varphi^{(2)}(x_1) = \varphi_1^{(2)} + R_1^{(2)}, \quad (24)$$

$$R_1^{(2)} = \rho_1^{(2)} - r_1^{(2)},$$

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in which  $R_1^{(2)} = \rho_1^{(2)} - r_1^{(2)}$ , and on the basis of certain inequalities previously mentioned by the author:

$$|R_1^{(2)}| \leq (1+Q) \epsilon_1 \quad (25)$$

in which  $Q$  is expressed by

$$Q = (b-a) K_0 \quad (23)$$

In a general case, for the index  $p-1$  one has

$$\varphi_i^{(p-1)}(x_i) = \varphi_i^{(p-1)} + R_i^{(p-1)}, \quad (26)$$

in which  $\varphi^{(p-1)}(x_i)$  and  $R_i^{(p-1)}$  are expressed by

$$\varphi_i^{(p-1)} = f(x_i) - \frac{b-a}{2n} \left[ K(x_i, x_0) \varphi_0^{(p-2)} + K(x_i, x_1) \varphi_1^{(p-2)} + \right. \\ \left. + 2 \sum_{j=1}^{n-1} K(x_i, x_j) \varphi_j^{(p-2)} \right], \quad (27)$$

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and

$$|R_i^{(p-1)}| \leq (1 + Q + \dots + Q^{p-2}) \varepsilon_1, \quad (28) \quad (28)$$

which is accurate for  $p = 3$ . Using for  $\varphi^{(p)}(x_i)$  and  $\varphi_i^{(p)}$  the formulae

$$\varphi^{(p)}(x_i) = [\varphi_i^{(p)}] - r_i^{(p)}, \quad (29) \quad (29)$$

and

$$\varphi_i^{(p)} = f(x_i) - \frac{b-a}{2n} \left[ K(x_i, x_0) \varphi_0^{(p-1)} + K(x_i, x_1) \varphi_1^{(p-1)} + 2 \sum_{j=1}^{n-1} K(x_i, x_j) \varphi_j^{(p-1)} \right], \quad (31) \quad (31)$$

respectively, the author deduces for  $\varphi^{(p)}(x_1)$  the formula

$$\varphi^{(p)}(x_1) = \varphi_1^{(p)} + R_1^{(p)}, \quad (34) \quad (34)$$

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in which  $\varphi_i^{(p)}$  is given by (31), while  $R_i^{(p)} = \varphi_i^{(p)} - r_i^{(p)}$ . For  $R_i^{(p)}$  he deduces

$$|R_i^{(p)}| \leq (1 + Q + \dots + Q^{p-1}) \varepsilon_i \quad (35)$$

For calculating the relative  $\varphi_i^{(p)}$  numbers at the knots of the  $\Gamma$  network, the author deduced an algorithm. For the knots of the  $\Gamma$  network, there is the formulae (34), in which the  $R_i^{(p)}$  verifies the inequality (35). For  $p = 0$ ,

$$\varphi_i^{(0)}(x_i) = \varphi_i^{(0)} + R_i^{(0)}, \quad (36)$$

in which

$$|R_i^{(0)}| \leq (1 + Q + \dots + Q^{p-1}) \varepsilon_i \quad (37)$$

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Selecting  $\varepsilon_1$  in such a way that  $(1 + Q + \dots + Q^{-1}) \varepsilon_1 < \varepsilon_1$  (38)

in the formula (36) there will be  $R_1^{(v)} < \varepsilon$ , (39)

Returning to the  $\varphi(x)$  integral of Eq. (1), the following identity may be established:

$$\varphi(x_1) - \varphi_1^{(v)} = \int_{x_1}^{\varphi^{(v)}(x_1)} \varphi^{(v)}(x_1) - \varphi_1^{(v)} dx, \text{ and the in-} \quad (40)$$

equalities (6) and (36) show that:

$$|\varphi(x_1) - \varphi_1^{(v)}| < 2\varepsilon. \quad (40)$$

Thus, at a given positive number  $\varepsilon$ , a network  $\Gamma$  on the  $[a, b]$  interval could be determined by inequalities (15) and (38) and the calculation algorithm for the numbers  $\varphi_1^{(p)}$ , in which  $p = 0, 1, \dots, v$ , so that  $\varphi_1^{(p)}$  has to represent approximately the values of the  $\varphi(x)$  integral on the knots of the  $\Gamma$  network, also obtaining the inequality (40).

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Numerical integration of ...

ASSOCIATION: Institutul de calcul, filiala Academiei R.P.R. (Com-  
puter Institute, Branch of the R.P.R. Academy, Cluj)

SUBMITTED: January 11, 1960

Card 12/12

IONESCU, D.V. [Ionescu, D.V.] (Kluzh, Rumynskaya Narodnaya Respublika)

Representation by a double integral of the divided difference  
of the order  $(m,n)$  of a function of two variables. Dokl. AN  
SSSR 141 no.5:1026-1029 D '61. (MIRA 14:12)

1. Predstavleno akademikom A.N. Kolmogorovym.  
(Functions of several variables)  
(Integrals)

<sup>SC U</sup>  
IONESCU, D.V., [Ionescu, D.V.] (Kluzh, Rumynskaya Narodnaya Respublika)

Representation of the divided difference of the order  $(n,n)$  of the function of two variables by a double integral. Dokl. AN SSSR 141 no.6:1294-1297 D '61. (MIRA 14:12)

1. Predstavleno akademikom A.N.Kolmogorovym.  
(Functions of several variables) (Integrals, Multiple)

IONESKU, D.V. [Ionescu, D.V.] (Kluzh, Rumyniya)

Residual term in Adams' numerical integration formula. Zhur. vych.  
mat. i mat. fiz. 2 no.1:154-157 Ja-F '62. (MIRA 15:3)  
(Differential equations) (Integral equations--Numerical solutions)

IONESCU, D.V.

On a cubature formula. Studia Univ B-B S. Math-Phys 8 no.1:79-91  
'63.



IONESCU, D.V.

Some practical formulas of quadrature. Comunicarile AR 13  
no.8:689-695 Ag'63.

1. Comunicare prezentata de academician T.Popoviciu. Academia  
R.P.R. Filiala Cluj, Institutul de calcul.

IONESCU, D.V., prof. univ. (Cluj)

Geometric considerations on the quadratic equation with complex coefficients. Gaz mat fiz 15 no.5:225-231 My '63.

IONESCU, D.

Methods applied to the numerical integration of differential equations of the first order. Doklady BAN 16 no.5:469-471 '63.

1. Note présentée par L. Tchakaloff [Chakalov, L.], membre de l'Académie, membre du Comité de rédaction, "Doklady Bolgarskoy Akademii nauk, Comptes rendus de l'Académie bulgare des Sciences."

ACCESSION NR: AT4034527

P/2508/64/014/002/0169/0181

AUTHOR: Ionescu, D. V. (Cluj)

TITLE: Generalisation of V. N. Fadeeva's numerical derivation equation

SOURCE: Polska Akademia Nauk. Instytut Matematyczny. Annales polonici mathematici, v. 14, no. 2, 1964, 169-181

TOPIC TAGS: numerical derivation equation, polynomial, integral, analysis, theory of functions, Fadeyeva derivation equation, differential equation

ABSTRACT: The author generalizes the numerical derivation equation

$$\Delta^2 f(x_i) = \frac{h}{2} [f'(x_i) - f'(x_{i+1})] + R$$

studies the remainder which is stated in the form of a definite integral; and demonstrates the numerical integration of the differential equations. Author establishes the equation

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ACCESSION NR: ATH034527

$$\Delta^{n-1}f(x_1) = A_1f'(x_1) + A_2f'(x_2) + \dots + A_nf'(x_n) + R,$$

in which the remainder R should be zero when  $f(x)$  is any  $n$  degree polynomial whatsoever. The coefficients  $A_1, \dots, A_n$  are determined and its remainder is studied with the result that  $A_k = (-1)^n A_{n-k+1}$  and, if  $n = 2p + 1$ , then  $A_{(n+1)/2} = 0$ . The derivative  $\psi_j^{(n+1)}(x)$  have a single zero in the interval

$[x_j, x_{j+1}]$ ; point  $x = (x_j + x_{j+1})/2$ . It is seen that

$$R_j = (-1)^{j-1} \frac{(n-3)(n-4)\dots(n-j-1)}{(j-1)!}$$

and

$$\psi_j^{(n-1)}(x_j) + \psi_{j+1}^{(n-1)}(x_{j+1}) = 0.$$

Author demonstrates that the function  $\psi(x)$  is negative in the interval  $(x_1, x_n)$ . Therefore, the remainder R of the numerical derivation equation becomes

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ACCESSION NR: AT4034527

$$R = f^{(n+1)}(\xi) \int_a^b \varphi(s) ds,$$

which yields

$$R = -f^{(n+1)}(\xi) h^{n+1}/12$$

and

$$|R| < M_{n+1} h^{n+1}/12,$$

If the integral of the differential equation

$$y' = f(s, y)$$

which satisfies the condition  $y(x_0) = y_0$  was previously calculated for the nodes  $x_2, x_3, x_4, x_5$ , the integral can be calculated by node  $x_1$ ;  $x_6$  can be determined by the Adams numerical integration equation. Orig. art. has: 55 equations.

ASSOCIATION: none

Card 3/103

IONESCU, D.V., prof. univ. (Cluj)

On some arithmetical progressions. Gaz mat B 15 no. 6:  
245-250 Je '64.

IONESCU, D. V.

Construction of some practical formulas of quadrature. Studii  
cerc mat 16 no.6:757-769 '64.



IONESCU, D.V.

Generalization of the quadrature formulas of Simpson and  
Newton. Studii cerc mat 16 no.8:1001-1032 '64.

ACCESSION NR: APL038712

S/0251/64/034/001/0011/0018

AUTHOR: IONESCU, D. V.

TITLE: Generalization of quadrature formulas of Simpson, Newton, and Milne  
(Presented by Academician Sh. Ye. Mikeladze on 10 November 1963)

SOURCE: AN GruzSSR. Soobshcheniya, v. 34, no. 1, 1964, 11-18

TOPIC TAGS: quadrature formula, arithmetic progression, error estimate, remainder term, continuity assumption, differential equation, boundary condition, trapezoid rule, integration formula

ABSTRACT: The author investigates quadrature formulas of the form

$$\int_{x_0}^{x_n} f(x) dx = A_0[f(x_0) + f(x_n)] + A_1[f(x_1) + f(x_{n-1})] + \dots + A_{p-1}[f(x_{p-1}) + f(x_{n-p+1})] + A_p[f(x_p) + f(x_{p+1}) + \dots + f(x_{n-p})] + R \quad (1)$$

$$\int_{x_0}^{x_n} f(x) dx = A'_1[f(x_1) + f(x_{n-1})] + A'_2[f(x_2) + f(x_{n-2})] + \dots + A'_p[f(x_p) + f(x_{n-p})] + R$$

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ACCESSION NR: AP4038712

$$+ f(x_{n-p}) + A'_{p+1} [f(x_{p+1}) + f(x_{p+2}) + \dots + f(x_{n-p-1})] + K. \quad (2)$$

which are generalizations of standard integration formulas. He obtains the usual type error estimates. Orig. art. has: 13 formulas.

ASSOCIATION: Akademiya nauk Rumynskoy Narodnoy Respubliki Klushakiy vychislitel'nyy institut (Academy of Sciences, Rumanian Peoples Republic, Klushakiy Computing Institute)

SUBMITTED: 10Nov63

DATE ACQ: 04Jun64

ENCL: 00

SUB CODE: MA

NO REF SOV: 001

OTHER: 000

Card 2/2

L 17645-65 EWT(d) Pg-4 IJP(c)/ASD(a)-5/AFWL/AFETR/ESD(dp)  
 R/0021/64/009/003/0237/0243  
 ACCESSION NR: AP4045048

AUTHOR: Ionescu, D. V.

TITLE: Some practical formulas for the numerical integration of differential equations

SOURCE: Revue Roumaine de mathematiques pures et appliquees, v. 9, no. 3, 1964, 237-243

TOPIC TAGS: Adams formula, differential equation, numerical analysis, numerical integration, quadrature

ABSTRACT: The present paper considers the numerical solution of the differential equation  $y' = f(x, y)$  with the boundary value of  $y(x_0) = y_0$ , the equation being solved over the interval  $[x_0, x_0 + a]$ . Certain generalizations of Adams' formula are developed yielding quadrature formulas of the following sorts: let  $x_0, x_1, \dots, x_6$  be points in an arithmetic progression with difference  $h$ , a certain rectangular region  $D$ ,  $f_n(x, y) = y^{(n)}$ , and

$$F_n = \sup_{(x,y) \in D} |f_n(x, y)|.$$

(1)

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ACCESSION NR: AP4045048

then 
$$y(x_0) = \frac{1}{3} (3y(x_0) - 32[y(x_1) - y(x_0)] - 5[y(x_2) - y(x_1)]) +$$
  

$$+ 20h[g(x_1) + g(x_2)] + R_1 \quad (2)$$

$|R_1| \leq \frac{8}{21} F_0 h^2 < 0,3810 F_0 h^2.$

$$y(x_1) = \frac{1}{6} (y(x_0) + 31[y(x_1) - y(x_0)] - 50[y(x_2) - y(x_1)]) +$$
  

$$+ 5h[g(x_1) + g(x_2)] + R_2 \quad (3)$$

$|R_2| \leq \frac{5}{21} F_0 h^2 < 0,2381 F_0 h^2.$

$$y(x_2) = y(x_1) + 2,953125[y(x_1) - y(x_0)] +$$
  

$$+ 0,46875 h (9[g(x_1) + g(x_2)] + 20g(x_2)) + R_3 \quad (4)$$

$|R_3| \leq \frac{15}{56} F_0 h^2 < 0,2679 F_0 h^2.$

$$y(x_3) = y(x_2) + 135[y(x_2) - y(x_1)] +$$
  

$$+ 6h(9[g(x_2) + g(x_3)] + 28g(x_3)) + R_4 \quad (5)$$

$|R_4| \leq \frac{21}{35} F_0 h^2 < 0,6000 F_0 h^2.$

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ACCESSION NR: AP4045048

are valid respectively when  $f(x, y)$  has as many continuous derivatives as there are division points in the interpolation. Orig. art. has: 48 formulas.

ASSOCIATION: None.

SUBMITTED: 10Oct63

ENCL: 00

SUB CODE: MA

NO REF SOV: 001

OTHER: 002

Card 3/3

IONEJCU, D.V.

(Clnj)

Generalization of V.N. Fadseyev's numerical derivation formula. Annales Pol math 14 no.2:169-181 '64

IONESKU, D.V. [Ionescu, D.]

Generalization of Simpson's, Newton's and Milne's quadrature  
formulas. Soob. AN Gruz. SSR 34 no.1: 11-18 Ap'64  
(MIRA 17:7)

1. Kluzhskiy vychislitel'nyy institut, AN Rumynskoy Narodnoy  
Respubliki. Predstavleno akademikom Sh. Ye. Mikeladze.



SZILAGYI, P.; IONESCU, D.V., prof. dr.; IACOB, G., acad. prof.; HAIMOVICI, M., acad. prof.; CALUGAREANU, G., acad. prof.

About solving the Dirichlet's problem on the system of equations of elliptic type, second order, with partial derivatives. Studia Univ B-B S. Math-Phys 9 no.2:140-142 '64.

1. "Babes-Bolyai" University, Cluj (for Ionescu, Calugareanu).
2. Universit. of Bucharest (for Iacob). 3. "A.I.Cuza", Iasi (for Haimovici).

IONESCU, E.

TECHNOLOGY

Periodicals: ELECTROTEHNICA. Vol. 6, no. 9, Sept. 1958

IONESCU, E. On the improvement of fluorescent lighting. p. 346

Monthly List of East European Accessions (EEAI) IC, Vol. 8, No. 2,  
February 1959, Unclass.

IONESCU

RUMANIA / Zoonoses. Parasitic Worms.

G-2

Abs Jour : Ref Zhur - Biol., No. 8, 1958, No 33970

Author : Unguryanu, Ionescu, <sup>Ecatarina</sup> Boindzhanu-Dranga, Boldesku, Kryshmary, Khutsu

Inst : Not given

Title : The Problem of Helminth Control in Farm Districts. --  
K voprosu o borbe s galmintozami v selskoy mestnosti.

Orig Pub : Bul. stiint. Acad. RPR. Sec. med., 1956, 8, No. 4,  
1013-1034.

Abstract : No abstract.

Card 1/1

RUMANIA

APPROVED FOR RELEASE: Thursday, July 27, 2000 CIA-RDP86-00513R0005 71C  
IONESCU, E., Veterinar, the Becicherecul-Mic State Farm  
(GAS Becicherecul-Mic), Banat Regiune.

"Observations on a Focus of Paratyphosis in Pigs."

Bucharest, Revista de Zootehnie si Medicina Veterinara, Vol 13,  
No 10, Oct 63, pp 66-68.

Abstract: Presents a case of a paratyphosis focus affecting a maternity of Landrace sows at the Becicherecul Mic state farm. Describes the bacteriological studies and the clinical and anatomo-pathological data for the sick animals that confirmed the diagnosis of paratyphosis. Discusses hygiene and other methods for the eradication of the disease. A table shows the results of various methods of treatment on a total of 166 affected piglets.  
Includes 1 table.

1/1

IONESCU, E.; ROZENBERG, S.; BAZAVAN, I.

Dyeing polyamide and cellulose fiber blends with domestic dyes. p.410

INDUSTRIA TEXTILA. (Asociatia Stintifica a Inginerilor si Tehnicienilor din  
Romania si Ministerul Industriei Usoare)  
Bucuresti, Rumania  
Vol. 10, no.10, Oct. 1959

Monthly List of East European Accessions (EEAI) LC., Vol. 9, no.1, Jan. 1960  
Uncl.

CONSTANTINESCU-MOCIUTCHI, L.; IONESCU, E.

On the electric conductivity of thin lead films deposited at low  
temperatures. Studii cerc fiz 11 no.3: 541-555 '60. (EEAI 10:2)  
(Lead) (Metallic films) (Electric conductivity)

IONESCU, E.

S/081/62/000/012/037/063  
B166/B101

AUTHORS: Filip, A., Grancha, I., Ionescu, Ye.

TITLE: Activation of the cooling water in the primary circuit of the BBP-C-WAE (VVR-S-IAR) reactor in Bucharest

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1962, 377; abstract 12K24 (Rev. phys. Acad. RPR, v. 6, no. 3, 1961, 299-304)

TEXT: Long- and short-lived isotopes, products of the corrosion of Al and stainless steel, were determined by filtration of the water from the primary circuit of the reactor on an ion-exchange filter and detection of beta-active isotopes from the curves of their absorption in Al, and gamma-active isotopes by scintillation gamma-ray spectroscopy. It is suggested that the radioactivity of the water is caused by the presence of  $Mg^{27}$ ,  $Mn^{56}$ ,  $Na^{24}$ ,  $W^{187}$ ,  $Fe^{59}$ ,  $Sr^{89}$ ,  $Ta^{182}$ ,  $Ag^{110}$  and  $Co^{60}$ .  
10 references. [Abstracter's note: Complete translation.]

Card 1/1

FILIP, A.; GRANCEA, I.; IONESCU, E.

On the activation of the cooling water circulating in the primary circuit of the reactor VVR-S of Bucharest. Studii cerc fiz 12 no.3: 589-593 '61.

1. Institutul de fizica atomica, Bucuresti.

(Nuclear reactors) (Radioactivity) (Water)

ANCUSA, M.; CEAUSESCU, D.; PIRVI, F.; ROSIU, I.; IONESCU, E.; TELEGUT, M.

Some aspects of the water of the artesian wells in the region of Timisoara. Studii chim Timisoara 6 no.1/2:137-143 Ja-Je '60.  
(EBAI 10:3)

1. Institutul de igiena si sanatate publica R.P.R., Filiala Timisoara, Sectia de igiena comunala.  
(Romania--Water) (Artesian wells)



ANCUSA, M.; IONESCU, E.; TELEGUT, M.

Hydrobiological studies in the natural basin of the Birzava River.  
Studii agr Timisoara 8 no.3/4:237-253 J1-D '61.

1. Institutul de igiena si sanatate publica R.P.R., Filiala Timisoara,  
Sectia de Igiena Comunală.

ANCUSA, M.; IONESCU, E.

Considerations on the biological content in central water systems  
supplied with surface water. Studii agr Timisoara 10 no.1:  
163-178 Ja-Je '63.

ANCUSA, M.; IONESCU, Elena; NELEGUT, M.; CEAUSESCU, D.; PIRVU, Filofteia;  
ROSIU, Ileana

Considerations on the organisms in the artesian wells. Studii agr  
Timisoara 9 no.3/4:325-335 J1-D '62.

1. Sectia de Igiena Comunală a Institutului de Igiena R.P.R. Filiala  
Timisoara.

IONESCU, Elena (Pharmacist)

MATEI, Al., Pharmacist; PAVEL, E., Pharmacist; BRATU, Doina, Pharmacist;  
IONESCU, Elena, Pharmacist; BALTAZAR, Rodica, Pharmacist; VASILESCU, Iulia,  
Pharmacist; GEORGESCU, Ivona, Pharmacist; POPESCU, Ioanna, Pharmacist

Romania

Research done under the auspices of the Pharmaceutical Office of Arges  
Regiune, at the Laboratory for the Control of Drugs at the Pitesti Unified  
Tuberculosis Hospital

Bucharest, Farma, No 11, Nov 62, pp 673-682

"Solution of Certain Problems of Pharmaceutical Techniques"

8

ROMANIA

ANCUSA, M., Dr; PIRVU, F., Chim; IONESCU, E., Dr; ROSIU, I., Dr.

Institute of Hygiene and Protection of Labor of  
the RPR, Timisoara Branch (Institutul de igiena  
si protectia muncii al RPR, Filiala Timisoara)-(all)

Bucharest, Igiena, No 5, 1963, pp 467-475

"Sanitary and Hygienic Characterization of Waste  
Waters from Hemp Retteries"

AMERUS, T.; VELNIGERIU, A.; IONESCU, Elena; CRACIUN, Iuliana

Obtaining sodium trichloroacetate ~~herbicide~~. Rev chimie Min petr  
14 no.9:506-508 S '63.

1. Sectia agrochimie, Institutul de cercetari chimice (for  
Ionescu, Craciun).

IONESCU, Emil, dr. ing.; MATEI, D.D., ing.

Lamp with discharge in gases, with three electrodes, fed by a monophasic net. Energetica Rum 11 no.4:150-158 Ap '63.

STANESCU, Gh.; LIVIANU, V.; SERBESCU, O., ing.; SPITZER, Gh., ing.;  
NICOLAE, Badea; IONESCU, Elena; OPROIU, Tereza, ing.

High valorization of raw materials in light industry.

Probleme econ 17 no.9:159-162 S '64.

1. Technical Director, Ready-made Clothes and Knitwear Factory, Bucharest (for Stanescu).
2. Chief Engineer, Ready-made Clothes and Knitwear Factory, Bucharest (for Livianu).
3. Technical Director, the "30 Decembrie" Textile Works, Arad (for Serbescu).
4. Head of the Production Office, the "30 Decembrie" Textile Works, Arad (for Spitzer).
5. Director, the "Intex" Flax Weaving Mill, Paulesti (for Nicolae).
6. Chief Engineer, the "Intex" Flax Weaving Mill, Paulesti (for Ionescu).
7. Head of the Technical Office, the "Intex" Flax Weaving Mill, Paulesti (for Oproiu).

BUSTEA, Maria, dr.; DABIJA, Viorica, dr.; GHEORGHE, Ileana, dr.;  
IONESCU, E., dr.; IONESCU, Zenobia, dr.; LUNGU, Felicia, dr.;  
SALOMIN, Nadia, dr.; SAVIN, Valentina, dr.; STANESCU, I., dr.;  
STOICA, V., dr.; SERBAN, N., dr.; VISAN, Valeria, dr.

Our results in the treatment of complications of dental caries.  
Stomatologia (Bucur) 12 no.1:9-16 Ja-F'65.

1. Colectivul Serviciului de stomatologie al Spitalului uni-  
ficat de adulti, Constanta.



IONESCU, E.

New phosphatic fertilizers. p. 1. TEHNICA NOUA. (Asociatia Stiintifica a Inginerilor si Tehnicienilor) Bucuresti. Vol. 3, no. 41, Mar. 1956.

SOURCE: East European Accessions List (EEAL), Library of Congress, Vol. 5, No. 8, August 1956.

RUMANIA / Chemical Technology. Chemical Products and H-8  
Their Application--Elements. Oxides.  
Mineral Acids, Bases, Salts

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 8808

Author : Ionescu, E., Mendelsohn, N., Dumitrescu, G.,  
Bunus, F.

Inst : Not given

Title : Production of Aluminum Oxide for Electrolysis  
by Calcination with Limestone and Sodium Carbonate

Orig Pub: Rev. chim., 1957, 8, No 4, 235-241

Abstract: The high  $\text{SiO}_2$  content and preponderance of  $\text{Al}_2\text{O}_3$   
as diaspore, difficult to disintegrate, in  
Rumanian bauxites, compelled the abandonment of  
the Bayer method and the use instead of a basic

Card 1/3

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RUMANIA / Chemical Technology. Chemical Products and H-8

APPROVED FOR RELEASE: Thursday, July 27, 2000s. CIA-RDP86-00513R0005 71C

Mineral Acids, Bases, Salts

Abs Jour: Ref Zhur-Khimiya, No 3, 1959, 8808

method of roasting bauxites with  $\text{CaO}$  and  $\text{Na}_2\text{CO}_3$ .  
Results are given of experiments conducted by the  
Institute of Chemical Research for increasing the  
yield of  $\text{Al}_2\text{O}_3$  from bauxite and increasing produc-  
tion of the ore by the use of concentrated solutions  
of alkaline aluminate while lowering the production  
costs of the final product and obtaining  $\text{Al}_2\text{O}_3$  of  
high purity. A detailed study was made (under  
laboratory conditions) and optimum parameters were  
chosen for bauxite calcination, and the extraction  
of  $\text{Al}_2\text{O}_3$  from it was studied. A check of the se-  
lected methods under industrial conditions demon-  
strated the possibilities of obtaining  $\text{Al}_2\text{O}_3$  of  
high purity from Rumanian bauxites with a yield

Card 2/3

IONESCU, E.; WOHL, A.

A manufacture of magnesium thermophosphates. Note 1. p. 17.

REVISTA DE CHIMIE. Bucuresti, Rumania. Vol. 10, no. 1, Jan. 1959.

Monthly List of East European Accessions (EEAI), LC. Vol. 8, no. 9, Sept. 1959.  
Uncl.

IONESCU, E.

Results of the studies on the new varieties of fertilizers. p. 263.

REVISTA DE CHIMIE. Bucuresti, Rumania. Vol. 10, no. 5, May 1959.

Monthly List of East European Accessions. (EEAI), U. S. Vol. 8, no. 9, <sup>Sept.</sup> 1959.  
Uncl.

IONESCU, E. ; CHIRTA, G. ; CRISTESCU, L.

Obtainment of defluorinated thermophosphates. p. 572

REVISTA DE CHIMIE. (Ministerul Industrii Petrolului si Chimiei si  
Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania)  
Bucharest, Romania, Vol. 10, no. 10, Oct. 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, August  
1959

Uncl.

CONSTANTINESCU, L.; IONESCU, E.

A device for measuring the thickness of the thin layers deposited  
at low temperatures through the interference in the multiple beam.  
Studii cerc fis 11 no.4:1054-1057 '60. (KEAI 10:8)

1. Institutul de fizica atomica, Bucuresti.  
(Thin films) (Interferometry)

IONESCU, ELENA

SURNAME, Given Names

Country: Rumania

(2)

Academic Degrees:

Affiliation: -not given-

Source: Eucharest, Revista de Chimie, Vol 12, No 8, Aug 1961, pp 494-497.

Data: "Methods of Estimating the Dispersing Properties of the Surface  
Active Agents Used in Dying Textile Materials."

Authors:

CALIN, C., -Engineer.-

SUSZER, A., -Engineer.-

IONESCU, Elena, -Engineer.-

GPO 981643

SAMOIL, I., dr.; IONESCU, E., ing.; ALEXANDROAIA, I., ing.

Manufacturing superphosphate from phosphorites in the Vietnam  
Democratic Republic. Rev. chimie Min petr 12 no.9:512-519 S'61



GALIN, C., ing.; SUSZER, A., ing.; IONESCU, Elena, ing.

Method of estimating the dispersing properties of the surface active agents used in dyeing textile materials. Rev. chimie Min. petr. 12 no. 8: 494-497 Ag '61.

IONESCU, E.; CRISTESCU, Laurentia

Preparation of concentrated superphosphate from the phosphatic  
rock of the Democratic Republic of Vietnam. Rev chimie  
Min petr 13 no.2:70-80 F '62.

IONESCU, E.; PREDA, Victoria

Ammoniation of superphosphate with ammoniates. Rev chimie Min  
petr 13 no.5:270-274 My '62.

IONESCU, E.; TOMESCU, Eugenia; NUTA, Ernestina

Obtention of binary complex concentrated fertilizers; laboratory experiments of preparing the fertilizer with the ratio N:P=22:22.  
Rev chim Min petr 13 no.9:517-523 S '62.

ANCUSA, M.; IONESCU, E.; CEAUSESCU, D.; PIRVU, F.

Experimental research on the noxious action of industrial  
effluents of a siderurgical complex. Studii agr Timisoara  
10 no. 2: 257-265 J1-D '63.

IONESCU, E.; CHIRITA, Gh.

Ammoniation of superphosphate with gaseous ammonia on granulating plates. Rev chimie Min petr 14 no.3:130-136 Mr '63.

IONESCU, E.; PREDA, Victoria; KNALL, Ileana

Complex liquid fertilizers. Rev chimie Min petr 15 no. 5:  
245-251 My '64.

CALIN, G.; IONESCU, Elena

Structure and coloristic behavior of acid dyes. Rev chimie Min  
petr 15 no.10:611-623 0 '64.



REF ID: A54587 EWP(1) RM  
ACCESSION NR: AP5023228

RU/0003/64/015/010/0611/0623

Author: Ionescu, Elena

TITLE: Structure of acid dyes and their coloring action

15  
B

SOURCE: Revista de chimie, v. 15, no. 10, 1964, 611-623

TOPIC TAGS: dye chemical

ABSTRACT:

A report on the

work of the Central Dyeing Laboratory of the Rumanian People's Republic for determining the dyeing behavior of the acid dyes prepared in Rumania in order to prescribe optimum application conditions. Some information is also given on the influence of the dyeing bath on the absorption spectra of wool dyes and on the results of the dyeing. Some conclusions are drawn concerning the structure of acid dyes in general. Orig. art. has: 1 formula, 1 figure, 10 tables, 8 graphs.

ASSOCIATION: none

Card 1/2

2 64825-65

ACCESSION NR: AP5023228

G

SUBMITTED: 00

ENCL: 00

SUB CODE: GC

000

OTHER: 018

018

Card 2/2

IONESCU, Eliza, dr.; TURCANU, L. ; conf; NICLAUS, V., dr.; ARCAN, P., dr.;  
~~URSU, Teodora, dr.~~

Difficulties of diagnosis of cerebral tumors in children. Diagnostic value of the intracranial hypertension syndrome. (I.H.S.)  
Pediatria (Bucur.) 13 no.5:389-396 S-O '64

1. Lucrare efectuata in Serviciile de pediatrie, neurologie si neurochirurgie, Timisoara.

IONESCU, E.

The coleopter, streamlined missile of future. p. 11

Vol 1, no. 9, Sept. 1955  
ARIPILE PARTIEI  
Bucuresti

Source: East European Accessions List (EEAL), LC, Vol. 5, No. 2  
Feb. 1956

IONESCU, E.

IONESCU, E. Means to shorten the take-off. p. 13.

Vol. 1, no. 11, Nov. 1955

ARIPILE PATRIEI

TECHNOLOGY

Bucuresti, Rumania

So: Eastern European Accession Vol. 5 No. 4 April 1956

IONESCU, E......

Reduction of landing difficulties by means of preliminary rotation of undercarriage wheels. p. 30. ARIPIIE PATRIEI. (Asociatia Voluntara pentru Sprijinirea Apararii Patriei) Bucuresti. Vol. 2, no. 3, Mar. 1956.

So. East European Accessions List Vol. 5, No. 9 September, 1956

IONESCU, E.

Problems of flight, speed, and high altitude. p. 28.  
(Aripile Patriei, Vol. 3, No. 1. Jan. 1957, Bucuresti, Rumania)

SO: Monthly List of East European Accessions, (MEAL) Lc. Vol. 6, No. 8, Aug 1957. Uncl.

IONESCU, E.

The theory and application of the rule of sections in the construction of fuselages for high speed airplanes. p. 22.

(ARIPILE PATREEL.. Vol. 3, No. 4, Apr. 1957. Bucurest, Rumania)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 10, October 1957. Uncl.



IONESCU, Eduard, ing.; PICK, Gheorghe, ing.

A rapid method of calculation of the undetermined static moments due to the prestressing operation in continuous prestressed girders. Rev transport 12 no.2:60-66 F '65.

MATEESCU, M.; GRIGORESCU, R.; HERZOG, A.; IONESCU, F.; IURCENCO, V.;  
VLADEANU, M.

Obtention of polyvinyl butyral. Rev chimie Min petr 13 no.9:523-527  
S '62.

IONESCU, T.

SPIRCHEZ, T., Conf.; STOICHITA, S., dr.; MARINESCU, E., dr.; SCHIAU, S., dr.;  
DULGHIERU, Carmen, dr.; CONSTANTINESCU, S.; TACORIAN, S., dr.;  
ALOMAN, Lucia, dr.; IONESCU, P.; STOICA, M.; CLEJAN, L.;  
ALOMAN, N.

Physiopathology of dystonia of the afferent loop and of hepato-  
biliary disorders in the gastrectomized. Med. int., Bucur. 9  
no.2:231-247 Feb 57.

1. Lucrare efectuata in Clinica medicala si terapeutica nr.  
V, Bucuresti (director, conf. T. Spirchez).

(GASTRECTOMY, complications  
postop. afferent loop synd. & hepato-biliary disord.)  
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